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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/783,131
Filing Date: February 20, 2004
Appellant(s): STAM ET AL.

MAILED
DEC 12 2007
GROUP 3600

James E. Shultz, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/15/07 appealing from the Office action mailed
8/30/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1-59, 63 and 68.

Claims 60-62, 64-67 and 69-73 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

NEW GROUND(S) OF REJECTION

Claims 1-35, 37, 44, 46-48, 50-53 and 63 are rejected on additional grounds under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-27 and 42-54 are rejected on still further additional grounds under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,008,486	STAM ET AL.	12-1999
6,806,485	JACKSON, JR.	10-2004
2003/0210334	SARWARI	11-2003
6,515,271	SHIMIZU	02-2003
5,796,094	SCHOFIELD ET AL.	08-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

9.1 Claims 1-39 and 42-57 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. As per independent claims 1, 14, 28, 36 and 42, each of the claims were amended on 9/19/05 to include the limitation "wherein at least one vehicle equipment control signal is generated as a function of at least a portion of at least one image" in order to distinguish over the prior art; however, the claims lack sufficient structure for producing the vehicle equipment control signal for each of the possible claimed embodiments encompassed by the phrase "at least one other component selected from the group comprising". For example, the group of components listed in claims 1, 14 and 28 include a temperature sensor and low voltage differential signal transceiver which in and of themselves do not produce vehicle equipment control signals. The only "component" listed which may conceivably produce a vehicle equipment control signal is the "at least one control output", which one could reasonably argue does not define a "component" but rather a "signal". Furthermore, it is unclear whether appellant intends the "wherein" clause to limit claims 1, 14 and 28 to the control output "component" only. Claims 36 and 42 do not recite any structures capable of producing the vehicle equipment control signal. The claims fail to clearly set forth the necessary structures required to provide the functions set forth in the "wherein" clause of each independent claim.

B. All claims depending from a rejected base claim are also rejected as containing the same deficiencies.

9.2 Claims 28 and 29 stand rejected under 35 U.S.C. 102(b) as being anticipated by Stam et al. (6,008,486).

A. As per claims 28 and 29, Stam et al. discloses an imager comprising an image sensor with at least control outputs and analog to digital converter on a common silicon chip (Figure 1; column 3, lines 35-56). Stam et al. further discloses that the imager may be used in vehicle viewing systems and as such can be said to provide a vehicle equipment control signal (col. 1, lines 11-36; col. 4, lines 59-61; col. 5, line 66 to col. 6, line 1).

9.3 Claims 14, 16-18 and 20-23 stand rejected under 35 U.S.C. 102(e) as being anticipated by Jackson, Jr. (6,806,485).

A. As per claim 14, Jackson, Jr. discloses an automatic vehicle control equipment system which comprises an image sensor (Fig. 1; col. 3, lines 18-23) and at least one control output (col. 3, lines 37-40).

B. As per claims 16-18 and 20-23, as above wherein the image sensor is used to automatically control a vehicle's exterior lights (col. 2, lines 8-9) and further includes a processor, filtering logic and an analog to digital converter (col. 3, lines 24-47). The processor also determines ambient light from the sensor signals (col. 3, lines 16-18).

9.4 Claims 28-31 stand rejected under 35 U.S.C. 102(e) as being anticipated by Sarwari (2003/0210334).

A. As per claims 28-31, Sarwari discloses an imager (Figs. 1A-B) comprising an

image sensor (216) [0015] with at least one control output and processing circuitry on a common substrate (200) [0023]. The imager may also include filtering and an array of pixels configured as required by design [0032]. The "wherein" clause is being interpreted as an intended use of the imager and is thus given little patentable weight in distinguishing over the actual structural components claimed and disclosed in the prior art.

9.5 Claims 1-13, 15, 19, 24-29, 31-33, 36-49, 54-59, 63 and 68 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson, Jr. (*supra*) in view of Schofield et al. (5,796,094) and Shimizu (6,515,271).

A. As per claims 1, 28, 36, 40, 42 and 58, Jackson, Jr. discloses an automatic vehicle control equipment system as noted above in paragraph 9.3 whereby image information is used for controlling vehicle equipment (i.e., headlights). Additional details of a typical headlight control system which utilizes images from an imaging sensor is exemplified by Schofield et al. (see Abstract; Figure 3; column 11, 58-64). The claimed invention differs in that the system may include an enhanced transceiver or incorporation of the image sensor and other components on a common silicon wafer or incorporation of a low voltage differential signal transceiver and memory on a silicon wafer.

B. Shimizu discloses an image sensor unit (Figure 4) comprising an imager (101) with at least control outputs and low voltage differential signal (LVDS) transceiver (107) as well as a buffer memory (112). As shown in Figure 4, the components are at least interconnected by a wire. Shimizu further discloses that the components may be located on a common silicon wafer (column 6, lines 46-55). The LVDS permits high

transmission rates with reduced electromagnetic interference (column 6, line 56 to column 7, line 40). In addition, Shimizu discloses connecting the output of the imager to a processor via the LVDS transceiver (Figure 5). Shimizu discloses that the imaging sensor unit provides a small size, low cost means of providing imaging data and is less susceptible to noise and consumes less power (col. 2, lines 61-67). One of ordinary skill in the art would have found all these characteristics beneficial in control systems which utilize image information to carry out control processes, such as the vehicle-based systems of the type exemplified by Jackson, Jr. and Schofield et al.

C. As per claims 2-13, 15, 19, 24-27, 29, 37, 43-45, 48, 49, 54-57, 59 and 68, as above wherein Shimizu further discloses locating one or more components on a common silicon wafer and providing additional support circuitry such as analog to digital converters, filters and memory devices (column 6, lines 6-17, 43-58).

D. As per claims 31-33 and 38-39, as above whereby the size of the image array and/or associated memory capacities would have been dependent upon the particular devices used in constructing the imaging system.

E. As per claim 41, as above wherein Shimizu discloses providing a plurality of image sensors (column 9, lines 11-14).

F. As per claims 46, 47, 50-53 and 63, as noted above whereby both Jackson, Jr. and Schofield et al. disclose various vehicle equipment control systems which use image information as well as additional information provided by other sensors.

NEW GROUND(S) OF REJECTION

9.6 Claims 1-35, 37, 44, 46-48, 50-53 and 63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. As per claims 1, 3, 10, 14, 16, 17, 18, 20, 21, 28, 29, 37, 44, 46-48, 50-53 and 63, each claim includes the phrase “*selected from the group comprising*”. This phrase sets forth an improper open-ended Markush group whereby the elements included in the group is indeterminate. Since a Markush group is by nature closed, an acceptable phrase would be “*selected from the group consisting of*”. See MPEP 2111.03

B. All claims depending from a rejected base claim are also rejected as containing the same deficiencies.

9.7 Claims 1-27 and 42-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. As per claims 1, 14 and 42, the preambles set forth “An automatic vehicle equipment control system” but fail to recite any structures capable of automatically controlling vehicle equipment.

B. All claims depending from a rejected base claim are also rejected as containing the same deficiencies.

(10) Response to Argument

10.1 With regards to the arguments set forth in the Brief at VII (1) relative to independent claim 1, it appears appellant is relying upon structures disclosed in the specification, but not

explicitly recited in the claims, to support the function(s) of the "wherein" clause. Appellant appears to argue that by using the open-ended transitional phrase "comprising", one is to interpret the scope of the claim to incorporate any unclaimed structures required for supporting the functions recited (note claims do not invoke 112/6th). The appellant argues that "Various combinations of the structure disclosed throughout the specification is explicitly recited in each independent claims [sic]. As a matter of fact, the claim set is structured such that when more than one of the individual structural elements is recited, any one or more than one may generate at least one vehicle equipment control signal as a function of at least a portion of at least one image". First, each of the independent claims use the phrase "at least one other component selected from the group comprising" and thus are not limited to a combination of all the components recited. Second, since the "wherein" clause was added by amendment to distinguish over the prior art, it is improper to "read in" unclaimed structural limitations from the specification to support the functional language added by amendment to distinguish over the prior art. One of ordinary skill in the art would not have adequate notice as to what structure or combination of structures are actually encompassed within the scope of the claims. The examiner wishes to emphasize that the issue is not one of different interpretations of the claims, but rather different embodiments represented by the alternative claim language and whether each embodiment provides sufficient structure(s) to support the "wherein" clause. Appellant does not provide separate substantive arguments relative to remaining claims 2-39 and 42-57, but rather relies on the arguments presented relative to claim 1.

10.2 With regards to the arguments set forth in the Brief at VII (2) relative to independent claim 28, appellant argues that Stam et al. does not have either a control output or a low voltage

differential signal transceiver. However, as was noted above in paragraph 9.2 Stam et al. discloses at least a control output (see for example col. 5, lines 52-56) which may be used in a vehicle rear viewing display system. The remaining “argument” merely repeats the claim language verbatim. Appellant does not offer a separate argument relative to claim 29 other than its dependency on claim 28.

10.3 With regards to the arguments set forth in the Brief at VII (3) relative to independent claim 14, appellant offers contradictory statements relative to the Jackson, Jr. reference whereby appellant first states that Jackson, Jr. discloses “The optical moisture sensor can be a photo array, CCD or a CMOS” and later states “the reference does not even mention an image sensor”. Clearly, an optical sensor comprised of a photo array or CCD falls within the broad language of an image sensor. Regardless of appellant’s contradictory statements, Jackson, Jr. discloses an image sensor (Fig. 1; col. 3, lines 18-23) and at least a control output (col. 3, lines 37-40) as noted in paragraph 9.3 above. The remaining “argument” merely repeats the claim language verbatim. Appellant does not offer separate arguments relative to claims 16-18 and 20-23 other than their dependency on claim 14.

10.4 With regards to the arguments set forth in the Brief at VII (4) relative to independent claim 28, appellant offers contradictory statements relative to the Sarwari reference whereby the appellant first states that “Sarwari discloses an integrated CMOS imager” and later states “the reference does not even mention an image sensor”. Moreover appellant argues that “The *image sensor* of Sarwari ...” (emphasis added). Regardless of appellant’s contradictory statements, Sarwari does in fact disclose an imager (Figs. 1A-B) comprising an image sensor (216) [0015] with at least one control output and processing circuitry on a common substrate (200) [0023] as

noted in paragraph 9.4 above. The remaining “argument” merely repeats the claim language verbatim. Appellant does not offer separate arguments relative to claims 29-31 other than their dependency on claim 28.

10.5 With regards to the arguments set forth in the Brief at VII (5) relative to independent claim 1, appellant offers contradictory statements relative to the Jackson, Jr. reference as noted above in paragraph 10.3. Appellant makes similar contradictory statements relative to the Shimizu reference (“Shimizu discloses a CMOS image sensor … This reference does not even mention an image sensor”) and the Schofield et al. reference (“The Schofield et al. patent discloses a vehicle headlight control using imaging sensor. However, this reference does not even mention an image sensor …”). In addition, appellant does not address the combination of references but rather addresses them separately. Contrary to appellant’s assertion, the examiner has followed the *Graham v. John Deere* analysis of the prior art relative to the claim language and included a rationale as dictated in *KSR Int’l. Co. v. Teleflex, Inc.* As noted in paragraph 9.5 (A-B) above, the rationale for combining the references was stated as: “Shimizu discloses that the imaging sensor unit provides a small size, low cost means of providing imaging data and is less susceptible to noise and consumes less power (col. 2, lines 61-67). One of ordinary skill in the art would have found all these characteristics beneficial in control systems which utilize image information to carry out control processes, such as the vehicle-based systems of the type exemplified by Jackson, Jr. and Schofield et al.” Appellant has not disputed the examiner’s *prima facie* case of obviousness by identifying errors in the *Graham v. John Deere* analysis or the rationale provided as dictated in *KSR Int’l. Co. v. Teleflex, Inc.* The remaining “argument” merely repeats the claim language verbatim. Appellant does not offer separate arguments

relative to independent claims 28, 36, 40 and 42, but relies upon the arguments presented relative to independent claim 1 to establish patentability and in each case merely repeats the claim language verbatim. Appellant does not offer separate arguments relative to dependent claims 2-13, 15, 19, 24-27, 29, 31-33, 37-39, 41, 43-49, 54-57, 59, 63 and 68 other than their dependency on their respective base claims.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section (9) above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth

in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

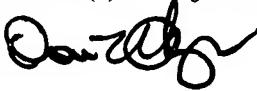
Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,



Michael J. Zanelli,
Primary Examiner, AU 3661

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:



DONALD T. HAJEC
DIRECTOR, TECHNOLOGY CENTER 3600

Conferees:

Thomas Black, SPE AU 3661



Meredith Pet travick, Appeal Conference Specialist

